Anguli BCDEFG, in planum per Centrum (Axi ad Angulos rectos) projiciantur. Non quod illi omnes ſint in eodem plano; ſed BDF ſunt in plano ſuperiori quod ab A (polo proximo) diſtat Axis triente; reliquiq; CEG, in plano huic parallelo quod tantundem diſtat ab oppoſito polo latente. Sed omnes hi Anguli, demiſſis in planum illud per centrum perpendicularibus projecti, formabunt in illo hexagonum regulare BCDEFG. Cui ſi intelligatur Circulus circumſcriptus; non erit ille, Circulus Sphæræ maximus (quia puncta ſic projecta non pertingunt ad extremum ambitum Circuli Sphæræ maximi per centrum;) ſed qualis ille eſt qui per BDF, vel per CEG, tranſit. Cujus itaq; Diameter eſt $=\sqrt{\frac{8}{3}}$. *Et* $PB=\sqrt{\frac{1}{6}}$: *Et* $PG=\sqrt{\frac{1}{2}}$: *Et* $BM=\sqrt{\frac{2}{3}}-\frac{1}{2}$. *Et* $MQ=\sqrt{2}-\frac{1}{2}\sqrt{3}$. *Cum itaq;* $MH=\frac{1}{2}=0.500$. (*ſemilatus incumbentis Cubi tranſituri*) *minus ſit quam* $MQ=\sqrt{2}-\frac{1}{2}\sqrt{3}=0.548+$; *Manifeſtum eſt (facto foramine HIKL) tranſire poſſe cubum incumbentem, perforato æqualem.*

VIII. *Account of Books.* 1. *Refractio ſolis inoccidui in ſeptentrionalibus oris juſſu sereniſſimi ac potentiſſimi Principis Caroli* II. *Suecorum, Gothorum, Vandalorum, &c. Monarchæ Clementiſſimi, circa Solſtitium æſtivum,* 1695. *aliquot obſervationibus Aſtronomicis detecta. Holmiæ in* 4°. *Sweediſh and Latin, and now Tranſlated into Engliſh, and Printed for* Ed. Caſtle *next* Scotland-Yard *Gate by* White-Hall, *in* 8°.

IN *Chap.* I. the Author, *J. Bilberg*, gives an Account of the King of *Sweden*'s Obſervation, which was, that being at *Torneo* in *Weſtro-Bothnia*, ſcituated in 65°. 43'. Lat.

he went up by Ladders into a Tower or Steeple in that City, 100 Foot high, where he, and thoſe with him, ſaw the Sun on the 14th of *June*, 1694. till 11 Hours, 53 Min. at Night, when a little Cloud covering it, it diſappear'd, and at 12 Hours 6 Minutes, it ſhined with moſt Bright Rays riſing out of the Cloud. The Natives uſed to ſee the Sun all Night, when 'tis Fair Weather at this time of the Year. This Obſervation was wrote down by the King, and he uſed to talk with Mathematicians about it at his return; who telling him much depended on the Situation of the Place, he reſolved to ſend the beſt Mathematicians of his Kingdom thither next Year, to note and relate every thing exactly.

In the Second Chapter he tells us, he, the Author, and one *Andrew Spole*, Mathematick Profeſſor at *Upſal*, were ſent into the North Countries, and deſigned to go further North than *Torneo*; they went out the 21ſt of *May*, *O. S.* and after Sixteen Days hazardous Travelling, by reaſon of the Difficulties of the Ferries, Rivers and Ways, which were but juſt thawed, and not yet firm, came to *Torneo*. This Town has conſiderable Traffick with *Lapland*, *Finland*, and *Muſcovy*, whither they go in Winter with Rain Deer. The firſt Night the Sun was hid in a Cloud at 11 h. 15′. and 45″. They obſerved the Latitude of the Place to be 65°. 43′ and that it was 4°. 50′. more Eaſtwardly than *Stockholm*, which was obſerv'd by Three Pendulum Clocks and Watches carried with them, agreeing with the Maps. The Variation of the Needle 7°. Weſt.

In *Chap.* III. we are told they obſerv'd in the Night between the 10th and 11th of *June*, ¾ of the Sun and its Center above the Horizon, only ¼ under, and that not only in the Turret, but alſo on the Ground where the North Proſpect appeared clear (which came from Refraction). They went Northward Ten Miles, through a River, where were Mountains of Ice, and in a Town call'd *Pello*, there obſerved the Sun all Night Two Diameters above the Horizon. The 14th of *June* they went to *Kenges* Copper and Iron Works,where they obſerved it Three Diameters above the Horizon, the Place being 66°. 45'. Lat. by Obſervation. They were hindered to proceed further, the Roads into North *Lapland* being impaſſable except in Winter. They got the Metals of the Countrey, and a piece of Magnet.They find them in the *Swediſh* Iron Mines, but the *Lappiſh* have greateſt Vertue of any the Author ever ſaw.They return'd by many Precipices through a Deſart Countrey only here and there an Inhabitant on the Banks ſide, (who live by Fiſhing, and the ſpade) to *Torneo*, where they made an Obſervation for the Latitude of the Place, which agreed with the other.

In the Fourth Chapter he treats of Refractions, and how they come, and are greater in ſome Places than others,through the different Conſtitution of the Air.Nearer the Poles they are the greater, ſo that the *Dutch* in *Nova Zembla*, ſaw the Sun through Refraction, when it ought to have been 4°. under the Horizon, by ordinary Refraction Tables, he aſſerts this to be the Reaſon of their ſeeing the Sun at *Torneo*, which ought to have been 47'. below the Horizon. He recounts other Obſervations, and makes them plain with proper Schemes.

In the Fifth Chapter he treats of the *Frigid Zone*; and ſays, at *Torneo* they were *Periſcii*, having the Shadow go round them. In Sea Towns they make Obſervations better than at Land, becauſe of the Interpoſition of Trees and Mountains. The Sun ripens their Corn in Six or Seven Weeks, which they ſaw in the Graſs in *Weſt Bothnia*, which in *June*, paſſing, was come out of its Stalk, a Month after in their Return was mowed. The Inhabitants live long. They have ſeldom Thunder.

In the Sixth he treats of the Latitudes of Places they obſerved in their Return, as *Cublea* to be 65°. 25'. and the Magnetick Variation was 6°. Weſt. At *Scheleſta*, Lat. 64°. 37'. Variation the ſame. At *Uhma*, Lat. 63°. 48'. At *Sodechamn*, 61°. 12'. At *Geffle*, 60°. 31'. *Lomeſheden*, 60°. 41'. *Fahlun*, 60°. 32'. *Upſal*, 59°. 54'. *Var*, 8°. They came to the King at *Kongſor*, in 59°. 34'. Lat.

In the Seventh Chapter he treats of the Figure of the Earth, Variation of the Needle, and Difference of Refractions under the Pole and Equator. He obſerves the Places where they travel'd, all laid too Northerly in the Maps; and diſcourſes of the Figure of the Globe, which he is apt to believe is not Spherical: and of the Variation of the Variation of the Needle.

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2. *De Fontium Mutinenſium admirandâ Scaturigine Tractatus Phyſico Hydroſtaticus, Bernardini Rammazzini, in Mutinenſi Lycæo Medicinæ Profeſſoris. Mutinæ* 1691. *in* 4*to. Tranſlated into Engliſh, and illuſtrated with many curious Remarks and Experiments, by the Author, and Tranſlator, Dr.* Rob. St. Clair. London, *Sold by* W. Newtoun *in* Little Brittain. 1697. *in* 8*vo.*

THE Author *Ramazzini* begins his Treatiſe with a Deſcription of the Wells, and in the Beginning he tells us, that in any part of the Plain of *Modena*, one cannot miſs by digging Sixty Three Foot deep to have an excellent Spring of moſt pure Water That in digging the firſt Fourteen Feet, they met with the Footſteps of an old City, Cauſeways of Flint, Tradeſmens Shops, the Pavements of Houſes; which he ſays, cannot be attributed to the City's being Ruin'd and Rebuilt, for all the Plain is of the ſame Heighth with the City.

Secondly,

Secondly, Below that is Fenny or Marſhy Ground, full of Reeds, Which continues till they come to the Depth of Twenty Eight Feet; where they *Thirdly*, Meet with a Bed of Clay Eleven Feet deep. Then *Fourthly*, appears a Marſhy Ground, not unlike the former, and *Fifthly*, a Bed of Clay, but not ſo thick as the former. *Sixthly*, a Bed of Marſhy Ground. *Seventhly*, A Bed of Clay and Sand, mixt with Sea Products, this laſt Bed they pierce with an Auger, upon the pulling up of which, the Water flows up with ſo great Violence, that it caſts up Sand and Pebbles that ſometimes weigh Four or Five Ounces.

Before they bore this laſt Bed,they hear a remarkable Murmur and Noiſe, which upon the Authors ſtamping on the Ground with his Foot, did encreaſe to that Degree, that he fearing all would ſuddenly fall about his Ears, ordered himſelf quickly to be pull'd up.

Upon the Firſt riſing of the Water in one of theſe Wells, the Water ſettles in the next Wells, the Number of theſe Wells is ſuch, as to make a Canal big for carrying Veſſels in which they go to *Venice*.

Chap. II. He ſays, that theſe Waters are running Waters, which he proves by the Noiſe they make before their boring, and by their ſudden riſing after the Auger is drawn out, nor can this be occaſion'd by the Preſſure of the Ground ſqueezing up the Water at the open Hole, for ſo the Ground would fall into the Place of the Water that riſes up which yet is not obſerved; but he derives them from a Ciſtern in the Appenine Mountains, that runs through a of Sand lying under the laſt Bed of Clay, which the Author in this and the Fifth Chapter illuſtrates with many curious Experiments, that make his Opinion highly probable.

Chap. III. He proves, that this Source cannot be from a Subterraneous River, on which Occaſion he makes

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mention of the River *Timavus*, that Ebbs and Flows as the Sea does. Which wonderful Phænomenon is better explain'd by the Tranſlator, than ſeems ever yet to have been accounted for.

Chap. 4. Treats of the antient State of the Country on this and the other ſide of the River *Po*.

Chap. 5. Treats of the Nature and Condition of this hidden Spring.

Chap. 6. The Progreſs and End of the Waters is inquired into, and a Reaſon is given of the uſe of things, which are obſerved in the digging of the Wells.

Chap. 7. Contains very curious Experiments about the Motions of Fluids tending highly to illuſtrate the Subject in Hand; and in this he gives Proof how much thoſe that take Pleaſure in framing Hypotheſes, might be aſſiſted in making more rational Conjectures than they do, if they were well acquainted with experimental Philoſophy.

Chap. 8. Contains many Remarks about the excellency and goodneſs of the Wells of *Modena*.

With the Book tranſlated, are publiſhed ſeveral Obſervations and Experiments by the Tranſlator, Dr. *Rob. St. Clair*, who formerly was Operator and uſed to try Experiments for the Honourable *Robert Boyle*, Eſq.

ERRATA.

PAG. 723. l. 31. for *have* read *half*. p. 724. *l*. 5. for *Nerf* read *Nerve*. l. 24. for *Parts* read *Lines*. l. 30. for *Parts* read *Lines*.

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